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VULNERABILITY EXPOSURE IN INFORMAL MANUFACTURING SECTOR A REFLECTION ON CONCEPTUAL AND ANALYTICAL ISSUES

Varinder Jain¹

INTRODUCTION

‘Working Poor’ is the phrase often used to describe the economic plight of working masses in informal sector. In fact, the informal sector employment suffers from not only inadequate and irregular earnings but they also remain exposed to a variety of vulnerabilities. There has been a plethora of research that has examined various facets of vulnerability in the informal sector – most of this literature has focused on the domain of informal manufacturing. It is noteworthy that the inferences arrived by this research has been general in nature as most of the time, the analysis has remained narrative and there has been no systematic attempt to arrive at a framework to conceptualise and quantify the incidence of vulnerability in informal manufacturing sector so as to examine its correlates and the related characteristics that influence the exposure to vulnerability.

Such lacunae in research provide us an opportunity to arrive at a holistic framework for the quantification of vulnerability in informal manufacturing sector. This paper discussing various conceptual and analytical issues implicit in the quantification of vulnerability exposure in informal manufacturing sector serves as a first step towards that direction. Including this introductory section, the subject matter of this paper is spread over eight sections. The next section discusses the dominant views about informal sector. The third section upholds distinctive nature of vulnerability by distinguishing it from other related concepts of poverty, risk and uncertainty. The fourth section focuses on vulnerability in informal manufacturing sector and the fifth section elaborates on vulnerability triggering factors in this sector. The sixth section discusses the nature of workers who seems to be relatively more exposed to vulnerability. The seventh section provides a critical appraisal of available analytical framework for examining vulnerability and the final section concludes the discussion.

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This paper emerges out of the ICSSR-sponsored study on *Livelihood Insecurity in India's Urban Informal Sector: A Study of Manufacturing Segment across Selected Industrial Clusters*. The ideas discussed form the basis of a systematic inquiry on livelihood insecurity in this sector.

THEORISING INFORMAL SECTOR: AN APPRAISAL OF DOMINANT VIEWS

The development thinking during the 1950s remained focused on prevalence of dualism in developing economies and thus the existence of agricultural, traditional or subsistence sectors was contrasted with modern, capitalist and industrial sectors in the models constructed to understand the dynamics of development in these economies.² The subsistence economy in these simple models was represented by a variety of low-paid 'informal' activities. Such theoretical conjectures, though true to some extent, remained unsatisfactory to a large extent in the light of emerging complex realities of growing urban centres in developing economies. Such concerns urged the need to devise certain analytical concepts for capturing emerging realities. Amidst such concerns, the concept of informal sector was introduced in the 1970s (Peattie, 1987).

Keith Hart, an anthropologist, through his field work in Accra (Ghana) recognized that numerous economic activities were carried out by masses not belonging to organised labour force. In his seminal work, Hart (1973: 68) emphasised that the "informal activities encompass a wide-ranging scale, from marginal operations to large enterprises." However, he did not provide a clear definition of informal sector. Moreover, with the adoption of this term by International Labour Organisation (ILO) in its subsequent studies, there emerged an interest in understanding the dynamics of this sector and the researchers offered a variety of definitions to explain the nature of this sector. There emerged a debate on definitional issues and thus, there appeared a large body of literature but with no unanimous consensus.³

As different views on informal sector were forwarded in literature, it is pertinent to understand them before initiating a systematic conceptualisation of vulnerability in informal manufacturing sector. In fact, there are primarily three schools of thought discussing the nature and scope of informal sector.⁴ A brief discussion on each school of thought is as under.

² For example, the seminal work of Lewis (1954) differentiates between a capitalist and a subsistence sector. Similarly, Ranis and Fei (1961) by building on Lewis' work, construct a dualistic model with an agricultural and a modern sector. They do not consider the existence of urban labour force outside the modern sector.

³ For discussions on informal sector concept, see Moser (1978), Peattie (1987, 1996) and Amin (1996).

⁴ There are other analysts as well to whom informalisation is not a recent phenomenon but a long run, large scale and systemic phenomenon of the capitalist world-economy; see, e.g., Tabak (2000) in this line of thought).

Dualist Perspective

The early literature on informal sector finds its basis in labour market dualism that is apparent in the co-existence of large, well-organised, high-technology firms with small-scale petty commodity producers and traders in developing economies.⁵ Such notion of informal sector has been an expansion of dual economy literature.⁶ The dualistic labor market theorists assert that informal sector is a disadvantaged sector and the workers not absorbed by formal sector make an entry into this sector to escape unemployment. In the formal sector, the wages are set above market-clearing prices for institutional (Fields, 1990) or market/efficiency-wage reasons (Stiglitz, 1974; 1976). In light of the fact that informal sector workers earn less than observationally identical workers in formal sector, it has been recognized that mere existence of lower wages and lower returns to education and experience in informal sector do not imply labour market segmentation;⁷ rather an alternative explanation for the existence of two segments in labor market finds its basis in the fact that a large number of those working in informal sector choose to do so voluntarily, either because the informal sector has desirable non-wage features (Maloney, 2004) and individuals maximize their utility rather than their earnings, or because the workers have a comparative advantage in the informal sector and would not do any better in the formal sector (e.g. Gindling, 1991).

Such observations highlight two opposing theories. The segmentation hypothesis considers the choice of informal employment as a strategy to escape involuntary unemployment, whereas the comparative advantage hypothesis considers it as a voluntary choice by workers which is directed by their motivation for income or utility maximization. Emerging research reveals that the theory of segmented labour markets has been supported, for a long time, by empirical research on static comparisons of earnings differentials (Maloney, 1998). It is based on the usual assumption that formal sector size and wages are exogenously fixed. The size of informal sector expands with size (and wages) of formal sector. But, given that informal sector income is shared among an ever-growing informal sector labour force competing in same market, this leads to ever-diminishing informal sector earnings (Mazumdar, 1976).

⁵ For example, see Fields (1974); Mazumdar (1976); Souza and Tokman (1976); Sethuraman (1976).

⁶ For example, see Lewis (1954) and Harris and Todaro (1970).

⁷ Rosenzweig (1988) provides a detailed literature review on this account.

Structuralist Perspective

The Structuralist perspective holds that there exist linkages between informal and formal sector and therefore, there is a need for an integrated framework, for both an understanding of informal sector and for effective policy recommendations (Tokman, 1978; Stark, 1982; Hemmer and Mannel, 1989 and Harriss, 1990). It does not see informal economy constituted exclusively of micro-entrepreneurs. Similarly, it does not subscribe to the notion that informal activities are necessarily traditional or marginal; rather it argues that they can be a part of modern capitalist economy and thereby possess the capacity for capital accumulation.

The informal activities are closely articulated to activities in formal sector through the supply of low-cost goods and services for workers in formal enterprises. The emergence of flexible specialization and sub-contracting in formal manufacturing emphasises such inter-dependencies in production relations of formal and informal sectors. Such a choice of sub-contracting the production process to small informal enterprises finds its basis in enterprise's desire to enhance cost-competitiveness. There is a twofold mechanism at play: direct hiring of workers off-the books; and subcontracting of production, input supplies, or final sales to informal entrepreneurs.

Legalist Perspective

Though the issue of legality has been raised by the proponents of informal sector⁸, it has assumed significance, following the work of Soto (1989, 2000), as a perspective to explain the existence of informal sector. Arguing against theorisation of informal sector as done by PREALC⁹ and marginality theorists, De Soto without recognizing the earlier research, proceeded to an entirely different conceptualisation. De Soto (1989) attributes the origins of informality not so much to excessive labour supply but to the excess regulation of the economy. He does not consider informal entrepreneur as low-productivity marginal actor but the one who manages to survive and prosper despite state oppression.

⁸ Hart (1973), for example, discusses about the existence of 'legitimate' and 'illegitimate' activities in the informal sector.

⁹ PREALC is the Spanish abbreviation for the Regional Employment Program of Latin America and the Caribbean of the International Labour Office (ILO).

Though there has appeared some research work related to this approach¹⁰, it is noteworthy that such theorization of informal sector as a dynamic enterprising sector (but unlegalised) suffers from many conceptual flaws especially in relation to its application in developing world. Breman provides sharp criticism due to its undue emphasis on capital and a significant departure from existing knowledge on the nature of informal sector in developing world. Breman (2003: 216) points out, “de Soto has created a new myth: that the informal sector consists largely of people who own property. They are not poor in the sense that they lack the basic means of production.” He points out, “de Soto’s analysis completely ignores the fact that property is not necessarily owned by those who use it as a means of subsistence. Land, building, tools or means of transport often have to be hired or leased. The costs of such sharecropping arrangements account for a disproportionate part of the total earnings..... By ignoring the kinds of transactions flowing from the unequal distribution of property, de Soto suggests that the surplus value generated by the wide range of activities performed at the foot of the economy makes the poor less poor (emphasis added). But this is not the way in which the process of accumulation usually works” (ibid: 217). He points out further, “by equating the distinction between legal and extra-legal with that between formal and informal, the author of *The Mystery of Capital* creates more confusion than clarity” (ibid: 218).

In line with Breman’s observations on informal economy (Breman, 1996; 2001), we too observe that de Soto’s perspective of considering informal sector workers not as marginalised ones is partial in its focus. There may be a few who got a chance to amass wealth in informal economy but a majority are suffering from poverty.¹¹ Moreover, emerging evidence also indicates that informal sector employment encompass multi-dimensional vulnerability (Kantor et al., 2006). This emerging evidence is largely based on conceptualisation of vulnerability as in Standing (1999) but it needs to be noted that the incidence of many insecurities as conceptualised by Standing is pervasive in informal sector which leaves a little choice of examining them further with statistical sophistication. Moreover, this conceptualisation does not address the characteristics of informal economy in developing world. In such a situation, there is a need to

¹⁰ See, for example, Maldonado (1995) and Lagos (1995).

¹¹ If it is not true, we might not have got such high magnitude of working poor in India, as high as 128.8 million during 1999-2000.

conceptualise further the notion of vulnerability by keeping in mind its key characteristics – for such an attempt, we focus on manufacturing segment but before doing so, we discuss how this notion of vulnerability is understood in literature.

DISTINCTIVE NATURE OF VULNERABILITY

The concept of vulnerability is distinct in its nature. To illustrate which, we consider it in comparison to other notions of poverty, risk and uncertainty. Though different opinions are forwarded in literature, it is worth considering the key points related to this distinction.

Vulnerability and Poverty

Chambers (1989) opined that anyone in spite of his being subject to adversities cannot be termed as vulnerable till he has sufficient resources at his disposal to cope with damaging loss. In his definition, vulnerability represents not lack of want (as in poverty) but the difficulty in coping with household's exposure to adverse situations. Glewwe and Hall (1998) in their study point out that poverty is related with one's current socio-economic status whereas vulnerability reflects changes in socio-economic status. They define vulnerability as either policy-induced or market-induced and following which, they point out that it is not necessary that poor (e.g. farmers in remote areas) will always be vulnerable because their relatively autarchic status limits impact of various national and international events on them. Similarly, Hoogeveen, et al. (2004), while defining vulnerability as exposure to an uninsured risk leading to a socially unacceptable level of well-being, point out that notion of vulnerability is quite different from poverty. They hold that in a risk free environment, it is possible for a household to have insufficient means for attaining an acceptable standard of living. But, in the absence of poverty, the notion of vulnerability loses its significance as long as it does not affect the well being of household dramatically.

But, Siegel and Alwang (1999) consider poverty to be an *ex post* state of being and vulnerability as both an *ex ante* and *ex post* state associated with probability of falling into a state of destitution. It opines that distinction between concepts of transient and chronic poverty is of significance in poverty analysis whereas it turns out to be somewhat arbitrary in vulnerability analysis as both transient and chronic poor are vulnerable.

Similarly, Chaudhuri, et al. (2002) considers concepts of poverty and vulnerability interlinked. It considers vulnerability as an *ex ante* (forward- looking) rather than an *ex post* concept. It holds that poverty status can be observed at a specific time period, given the welfare measure and poverty threshold whereas it is difficult to observe directly the incidence of vulnerability in household. It can only be predicted. Further, it considers household's observed poverty status (defined by status of household's observed consumption expenditure vis-à-vis a pre-determined poverty line) as ex-post realisation - an ex-ante probability of which is nothing but household's level of vulnerability.

Vulnerability and Risk

Some studies also link vulnerability with risk. Ligon and Schechter (2003), for example, consider risk as an important part of vulnerability. By adopting utilitarian framework, it captures the effect of risk on human welfare. It decomposes vulnerability measure into poverty and risk. The risk component is further decomposed into two parts, viz. aggregate risk and idiosyncratic risk. Based on panel household data from Bulgaria, it finds that despite poverty being single largest component of vulnerability, both unexplained risk and aggregate risk remained the second and third largest components of vulnerability measure. Similarly, Siegel, et al. (2001) decomposes vulnerability into several 'risk-chain' components, viz. risky events, risk responses and the outcomes. It considers that vulnerability begins with notion of risk and consequently, it defines household's vulnerability to future welfare loss as its exposure and response to risky events.

It is noteworthy that such consideration of risk may be due to the fact that the notion of risk in vulnerability literature is not taken in its strict economic sense. The core economics considers that phenomenon to involve risk when there is a range of possible outcomes, which could flow from it and when objectively known probabilities can be attached to these outcomes.¹² As in this definition of risk, the outcome of undertaking the risk is known, so following this definition, one may distinguish the concept of risk from vulnerability by arguing that risk per se cannot lead to vulnerability as one, given enough resilience, have choice to plan accordingly for averting upcoming crisis. Moreover, a

¹² Penguin Dictionary of Economics, 1986, pp. 385.

certain risk is always desired to boost up efficiency but the prevalence of vulnerability, even modestly, may lead to unproductive behaviours, e.g., among workers. It is also noteworthy that risk in economic literature is known to be of two types, viz. objective and subjective. Objective risk is based on secondary information about probability of an event's outcome. Subjective risk is based on decision maker's perception about probabilities of events and outcomes.¹³ Moreover, depending upon domain of its impact, the risk is also classified as idiosyncratic risk or covariate risk. The former type of risk (such as illness) is individual or household specific whereas the latter (such as economic or weather-related shocks) affect a number of households in a community or a region.

Vulnerability and Uncertainty

Uncertainty is another term commonly used interchangeably with risk but in economics, there exists a difference between the two as uncertainty, in economics, refers to plurality of outcomes to which objective probabilities cannot be assigned. It is such phenomenon about which nothing can be predicted and it is due to this element of randomness, it seems to be somewhat related with vulnerability. As discussed below, uncertainty resembles only first domain of vulnerability, i.e. threat. It does not contain any element that resembles other domains like exposure, coping capacities and experienced outcomes.

Having understood conceptual distinctiveness of vulnerability from other notions of poverty, risk and uncertainty, it is of interest to conceptualise meaning and scope of vulnerability in informal manufacturing sector and for such an endeavour, four queries may be raised: 1) what does the notion of vulnerability imply in the context of informal manufacturing sector? 2) why does vulnerability emerge and persist in this segment? 3) who are those at the risk of experiencing vulnerability in this segment? 4) how the incidence of vulnerability in this segment can be examined? These four queries are addressed below.

¹³ Siegel and Alwang (1999: 3, footnote 2).

VULNERABILITY AND INFORMAL MANUFACTURING SECTOR

The definitions of vulnerability proposed by Chambers (1989) and Moser (1998) are general in their character as they focus on conceptualising vulnerability experienced by general population. Nonetheless, they provide a basic ‘anatomy’ of vulnerability that can be adapted further to address prevalence of vulnerability in informal manufacturing sector. As these definitions inter-relate the analytical domains of threats, exposures, coping capacities and vulnerability outcomes, it is vital to understand them in the context of informal manufacturing sector.

Threats / Shocks

Threats refer to specific events that expose working masses to vulnerability. They are, in fact, the vulnerability triggering agents. Threats are termed as ‘idiosyncratic risk’ and ‘covariate risk’ depending upon their domain of influence. Threats related to idiosyncratic risk affect only individual concerned whereas threats related to covariate risk affect whole population. The working masses in their daily working life remain exposed to a variety of threats. Most often, these threats are idiosyncratic in nature. The wagedworkers, for example, experience a major threat of job loss. They also remained exposed to not only inadequacy of earnings but also lack of access to appropriate sources of borrowing money at times of urgency. Existence of unsafe working environs in informal enterprises poses another threat due to their implications for workers’ occupational safety and health. The wagedworkers also experience threat due to lack of autonomy and fairness in employer-employee relations. Similarly, the self-employed workers experience threat of discontinuity and uncertainty in their businesses. Existence of various constraints further poses threat to smooth functioning of their enterprises. These workers also remain exposed to threats posed by poor working conditions. Moreover, the existence of inadequate earnings along with skewed access to non-usurious borrowing source hints at another threat experienced by these workers.

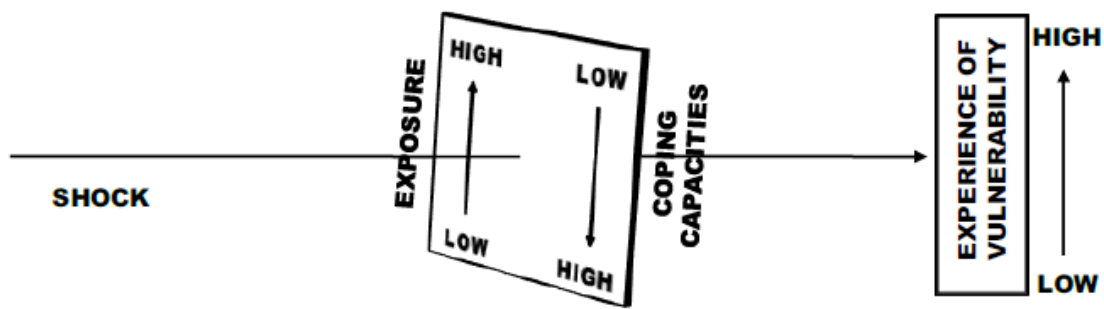


Figure 1: Schematic Representation of Domains Shaping Vulnerability in Informal Manufacturing Sector

Exposure and Coping Capacities

Exposure refers to states affecting the probability of encountering a certain threat. It is the linking factor between threat and subject at risk of threat due to its bearing of a certain characteristic. In the case of working masses, the states like gender, employment status, migration status, skill status etc. may influence worker's exposure to vulnerability in informal manufacturing sector. Besides exposure, it is the domain of coping capacities that plays a crucial role in determining whether a concerned individual or household is vulnerable or not in the event of its sudden exposure to a certain shock. It is noteworthy that this domain is considered crucial in both definitions of vulnerability provided by Chambers (1989) and Moser (1998). Both these definitions do not consider a subject vulnerable till it possesses adequate resilience to withstand adverse impact of shock. Though such assertions about the significance of coping capacities are relevant to a certain extent, it cannot be denied that the aspect of coping capacities is bound to lose significance in circumstances when working masses, in their attempt to offset adverse impact of a certain shock, reallocate not only their financial portfolios but also the labour mix. They indulge themselves in such trajectories that have a bearing on long term well-being of household members.

The coping capacities of working masses fall primarily into three broad categories, viz. individual capacities, household resources at disposal and the social networks. Individual capacities include personal wealth and human capital in form of education, skill and health. The human capital plays a greater role in influencing the kind of work activities to which they engage themselves. Individual capacities also include adaptations (like consumption smoothing, income smoothing etc.) to which working masses indulge in

experience or expectance of vulnerability. As individual capacities remain largely insufficient for dealing with recurrent vulnerability among working masses, they utilise household resources at their disposal. They also take advantage of another vital channel of social networks. Of course, the use of financial means for coping purposes seems to be justified as the loss emanating from such a strategy is not much irreversible. But, if working masses resort to the use of labour power of their household members especially children, the emanating loss to household well-being is definitely irreversible. In such cases, the domain of coping capacities loses its significance as determining factor and thereby concerned subjects may be termed as vulnerable as per earlier domains of threat and exposure.

Experienced Outcomes

This is the final domain emanating from interaction of threats, exposure and coping capacities. It reflects the impact of insecurity. It is also linked to household as it is at the household level, the individuals experience actual impact of insecurity. It is noteworthy that these domains are not mutually exclusive. It is not always appropriate to distinguish these domains as the working masses may be vulnerable due to a specific threat (experience of deadly diseases like cancer) but it may not be an outcome of a sudden process; rather it might be an outcome of his gradual exposure to hazardous chemicals over a long period of time.

FORCES SHAPING VULNERABILITY IN INFORMAL MANUFACTURING SECTOR

There are at least three channels by which emergence and persistence of vulnerability among working masses in informal manufacturing sector may be explained. The first channel relates this phenomenon to the absence of a sound social security mechanism. The second attributes it to the interplay of demand and supply forces in labour market related to informal manufacturing sector and the third considers various endogenous and exogenous factors underlying operational dynamism of informal manufacturing sector. An elaboration of these three channels is provided below:

A great deal of exposure to vulnerability can be smoothened if the concerned individual or household have access to some sort of financial assistance at times of contingency. Earlier when the economic structure was largely rural in its nature with pre-dominance

of joint family system, the individuals in households were having an automatic support of household at times of their exposure to any contingency. But, with changing structure of rural economy, urbanisation, growing individualism and rural to urban migration, the joint family system got replaced with nuclear family system. A straightforward drawback of this system is the fact that it isolated families from broader notion of family based on mutual support and assistance. It also weakened social cohesion and cooperation among families. In such situation, the existence of institutional social security system is another mechanism that may play a greater role in mitigating the plight of working masses during their exposure to certain contingencies. But, unfortunately such social security system in developing world remained fragile due to financial bottlenecks. The coverage of social security systems remained restricted and the benefits remained limited. Moreover, a large part of benefits has not flowed towards the needy; rather these favoured relatively better organised workers. The informal workforce remained largely outside this system which in the absence of familial support placed them in a vulnerable position.

Similarly, the emergence and persistence of vulnerability among working masses in informal segments can be explained through the interplay of labour supply and demand forces. Let's explain first supply side. In light of the fact when employment generating potential of organised segments witnessed sharp decline, the unorganised segments emerged as source of livelihood to an increasing workforce. This led to a heavy inflow of labour in these segments. A large proportion of labour seeking resort to this segment is illiterate / least educated and unskilled and by virtue of these endowments is bound to have relatively little bargaining power. Moreover, a majority of workforce in unorganised segments is of migrant origin. Such a characteristic further restricts their bargaining power in an alien land with all other implications related to dignity, autonomy and discrimination. On the demand side, the situation is quite different. The unorganised segments remain unregulated and largely outside legal framework without any strict adherence to recruitment and retrenchment norms. Here, the generation of employment remains largely conditioned by demands of business. At times of increasing competition, the unorganised firms remain in continuous pressure of lowering this cost. An upgradation of technology is one of the options that may be opted for lowering cost of production but the firms remain largely unable to do so as most often, technology remains an exogenous factor, updating of which is relatively dearer for small firms. Under

such situation, the firms, in the event of large availability of workforce, resort to intensive and extensive usage of labour in production process. Such a choice breeds insecurity in each and every domain of employment.

Besides the forces of supply and demand, there are various endogenous and exogenous factors related to informal manufacturing sector that trigger insecurity among working masses. First endogenous factor is related to existence of vague terms of employment. Often, there does not exist any written agreement between employer and employee about tenure, working hours, remuneration etc., and most often, agreements are verbal which provide employers a considerable power of eviction and exploitation. In such recruitment patterns, the workers are employed on a 'hire and fire' basis because such recruitment practices enable employers to adjust their production to demand fluctuations. But, the worker gets affected adversely by such practices of frequent job evictions, as at every time of seeking new employment, terms and conditions of employment get renewed, which may result in substantially lower earnings in new job than those in previous job. It also generates uncertainty about future employment relationships. Moreover, such employer-employee relations are based on the premise that it is only existing labour power for which worker would be remunerated and there would not be any compensation for contingency. Such nature of employment relations introduces insecurity in worker's life, as there is no one to approach at times of contingency.

Mode of payment is another factor that exposes informal manufacturing workers to insecurity. Generally, the mode of payment in this segment is of two types: time rate and piece rate. Both of these modes of payment have their relevance as each one is used depending upon the nature of work and kind of production activity involved. As the motive behind providing employment in informal manufacturing is to get the maximum out of worker, it is through the latter mode of payment that most of entrepreneurs wish to maximise their returns along with avoiding supervision cost. This mode of payment, profitable for the employer, affects adversely the worker by forcing him to self-exploitation for maximising cash returns. In the case of former, a rate is fixed for a certain period of time like a day or a month. But, in such modes of payment, most often, the number of hours to be worked by worker to justify his wage is not determined.

Moreover, the informal manufacturing sector does not provide much opportunity for upward mobility to workers. There exists no system for training and skill up-gradation like that is found in organised segment. Most often, workers experience job insecurity (as defined by ILO, 2004) when employers shift workers from one job to another. The continued acquaintance of workers with new jobs leaves them with specialisation to perform no job with full dexterity and efficiency. A high level of employment insecurity and employer's prescription of doing work in a certain way affects worker's own creativity and most often, he does his routine tasks mechanically without applying his wisdom to explore some better ways of doing the same job. Moreover, the prevalence of high uncertainty about the nature of next job makes workers less interested in acquiring new skills. All these, by contributing towards lower acquisition of skills by workers, have a cumulative impact on their insecurity and irregularity in employment.

Among exogenous factors, it is the choice of technology that emerges as a major factor to expose workers to various insecurities. The adoption of capital intensive technique of production works against labour in two ways: first, by reducing the avenues for profitable employment; and secondly, through intensification of work, i.e. there takes place, relatively speaking, an increase in speed at which worker has to finish a certain task, which, given prevailing wage rate, is nothing but a manifestation of exploitation to which the worker is exposed with adoption of capital intensive technique of production in manufacturing process. Another exogenous factor is the threat of competition among informal enterprises. The manufacturing units in this segment face competition threat from relatively large firms. The ongoing process of globalisation and liberalisation has further intensified this threat for these units. Cheap availability of Chinese products like rackets, garments, crockery, ball-pens and pencils etc. everywhere in Indian markets are few examples of emerging threat of global competition. Informal enterprises can survive in this era of competition either by upgrading its obsolete technology or by reducing labour cost or both. The process of technological up-gradation is much costly for these units, so most often, they rely on other alternative of reducing their labour cost by resorting to measures such as restricting upward wage revisions, lengthening working time, substituting male workers with female workers and child labour.

Sub-contracting-based production patterns also expose workers to various insecurities. Most of informal enterprises work as subsidiaries for large firms with sub-contracting-based production relations. The very weakness of small units in terms of their capital, credit resources and narrowness of markets at their command makes these units willing to accept sub-contracting relationships with large firms. The main advantages of such work-relations to small units are that these provide them with a regular flow of raw materials, an assured outlet for their products and the possibilities for assistance, guidance and financial help from parent firm. But, most often, such production relations expose them, at times of market fluctuations, to risk of reduced production activity when parent firm, controlling supply of raw materials, reduces or withhold orders. The large firms enjoy monopolistic advantages vis-à-vis numerous small units, which often suffer mainly due to presence of strenuous competition among them. They resort to desperate price-cutting and thereby, tend to sell their output at relatively low prices to big units.

Above all, a major exogenous factor responsible for vulnerability of working masses in informal segment is non-existence of collective voice of workers. A majority of workers in informal manufacturing sector have poor resource endowments both in terms of physical assets and their skill and knowledge, due to which they end-up with casual nature of their employment. By the very nature of such employment, they do not have any fixed place of employment and they often follow where their employment takes them. Such lack of fixed place of stay and work, when supplemented with their illiteracy and lack of awareness, weakens their ability to organise themselves for safeguarding their interests. This, in turn, has a bearing on their bargaining power and consequently, their earnings and terms of work, which ultimately leads to their exploitation. The illiteracy of workers leaves them unaware of various legislations enacted by Indian Constitution. Moreover, their fragile voice in society leaves little room for seeking justice even through these legislations.

WORKERS AT RELATIVELY HIGH RISK OF EXPERIENCING VULNERABILITY

In light of above discussion on various factors contributing to emergence and persistence of vulnerability, it seems to be true that working masses in informal manufacturing segment experience vulnerability in one sense or the other. But, in the light of first analytical issue (discussed below) upholding heterogeneous character of unorganised

workforce, it is also equally true that not all the workers experience a similar risk of vulnerability. Therefore, the question arises: who are those at the relatively high risk of experiencing vulnerability? Which characteristics hold significance in the characterisation of a certain worker being relatively more vulnerable than the other?

By deriving insights from literature on gender, one may say that female workers may be relatively more vulnerable than male workers (Agrawal, 1993; Deshpande and Deshpande, 1997). Similarly, the migrant workers may be vulnerable to various insecurities (Banerjee and Bucci, 1994; Dewan, 2001). There is also another strand of thought believing that workers belonging to socially-deprived castes may be more vulnerable than their counterparts belonging to other castes (Banerjee and Knight, 1985; Madheswaran and Attewell, 2007).

Nonetheless, one may derive insights from operational dynamics of informal manufacturing sector. Considering a specific case of recruitment and retrenchment, it becomes clear that most often, the employers while providing employment adopt the mechanism of 'Selective Discrimination'. As the intention of employers is to keep a right mix of skilled, semi-skilled and unskilled workforce, they prefer to keep stock of skilled and semi-skilled workforce if it is available at favourable terms. Under this mechanism, each and every worker is bound to experience job insecurity till he / she remains disadvantageous vis-à-vis others.

Though skill may be considered as a major criterion for determining advantageous status of workers, there are other factors like willingness to work: 1) at relatively lower wages, 2) for long working hours at same wage rate, etc. Incidentally, in cases where employers give weightage to skill, a large majority of female workers, migrant workers and workers belonging to socially-deprived castes may constitute set of disadvantageous workers but when employers give weightage to non-skill related factors, even the skilled workers may become vulnerable to job insecurity. Similar to job insecurity, though wagedworkers' vulnerability to other aspects remains contingent on employer's attitudes and whims, the characteristic of skill may moderate wagedworkers exposure to various vulnerabilities (Jain, 2008).

While explaining which households are bound to remain vulnerable, the criterion of poorly-endowed and better-endowed household (in terms of its asset possessions) holds significance. No doubt, each household belonging to informal manufacturing sector workforce is bound to experience a variety of economic shocks that have the potential of lowering living standard of household. But, it is this resource endowment status that determines whether household will soon experience an escape from vulnerability or an exposure to vulnerability.

TRACING VULNERABILITY IN INFORMAL MANUFACTURING

This is a central question but hitherto, very little attention is paid to this aspect and the researchers provided evidence on vulnerability of workforce in informal manufacturing sector without conceptualising it beforehand. There are various analytical issues that should be taken care of before exploring the incidence of vulnerability among workers. Owing to these concerns, we attempt to cover this research gap by appraising available criteria for assessing vulnerability along with discussing ILO's notion of vulnerability and its relevance in the context of informal manufacturing sector.

Available Criteria for Assessing Vulnerability Incidence: An Appraisal

Available literature indicates that till date, researchers attempted to trace out existence of vulnerability by using a variety of approaches. These approaches can be classified broadly under two categories, viz. 'Objective' and 'Subjective'. The objective approach relies on selection of an objective criterion for tracing out incidence of vulnerability. For example, Ligon and Schechter (2003) consider vulnerability as low expected utility. They adopt a utilitarian framework to capture effects of risk on household welfare. They define vulnerability as difference between the utility a household would derive from consuming some particular bundle of commodities with certainty and the household's expected utility of consumption. Chaudhuri et al., (2002) define vulnerability as expected poverty that can be captured through degree of consumption loss. Baulch and McCulloch (2002) define vulnerability as probability of entering into poverty. Similarly, Pritchett, et al. (2000) define vulnerability as probability of experiencing at least one episode of poverty

in near future.¹⁴ Kamanou and Morduch (2002) do not define vulnerability in terms of expected poverty; rather they are concerned with changes in expected poverty. Others like Glewwe and Hall (1998) consider variability in household consumption as their implicit indicator of vulnerability.¹⁵

A few researchers subscribing to objective approach define vulnerability in terms of welfare loss. Skoufias and Quisumbing (2005), for example, define vulnerability as ex-post assessment of the extent to which a negative shock has caused welfare loss whereas others like Hoddinott and Quisumbing (2003) have defined vulnerability as “uninsured exposure to risks”. Some researchers have linked vulnerability with household’s inability to cope with shocks. Amin et al. (1999) while examining access of micro-credit in Northern Bangladesh consider that household as vulnerable who is unable to smooth consumption in the face of fluctuations in income due to various covariate and idiosyncratic shocks to household resources. Kurosaki (2002) terms a household as vulnerable if it has to drastically reduce its consumption level when hit by a negative shock. In the similar vein, Cuna (2004) defines vulnerability as the inability of a household to secure its living standards at times of certain negative event.

It can be observed that researchers subscribing to ‘Objective’ school has applied differing objective criterion to examine existence of vulnerability. Moreover, they have identified those households as vulnerable who have already experienced either poverty or welfare downturns. Such an approach of identifying vulnerable households locates only those households who were at risk of poverty and are currently experiencing poverty. It does not help much in identifying those households who are at risk of experiencing poverty, i.e. the ‘would be poor’ households. In light of the fact that the notion of vulnerability has both realized and unrealized component of economic hardships, the objective approach, being based on collected statistics about past events, captures only realized component and unrealized component is only predicted with all possibilities of errors, which may

¹⁴ Pritchett, Suryahadi and Sumarto (2000) consider time as an important factor to determine the degree of household vulnerability. They hold that a long length of the time horizon is related with more risk and thereby more vulnerability.

¹⁵ Glewwe and Hall (1998) identify what types of households are vulnerable to macroeconomic shocks. They find out that the households headed by relatively well-educated persons as well as the females are less vulnerable in comparison to relatively less-educated and male-headed households respectively. Moreover, they point out that the households with more children are more vulnerable to economic shocks.

arise due to its foundation solely on objective indicators. Moreover, most of researchers while examining insecurity had used econometric tools through specification of pre-conceived functional forms. These functional forms are based on certain assumptions to which subjects of analysis, i.e. households or individuals should follow. It may or may not be possible for them to follow certain norms of behaviour, as the experience of insecurity is so severe that it leaves no room for acting in a certain specified manner. Further, the objective approach provides only a part of required information. The analysis relying solely on objective approach causes information deficit and may lead to wrong policies.

The subjective approach, on the other hand, attaches significance to one's subjective evaluations of own environment and is thereby based on individuals' perceptions about severity of forthcoming threats. Researchers using subjective approach attach significance to people's own evaluation and appraisal of their well-being. The basic premise of this approach is that individual's perception of insecurity is an outcome of his actual experience with various hardships, which may or may not be fully captured through quantitative indicators like consumption etc. It involves enquiring from people directly, on a certain pre-determined scale defining severity of insecurity, unhappiness, etc., how they feel about their earnings, employment, health, life etc. The use of this approach is limited in developing countries at least in the domain of welfare economics. But, this approach is much widely used in developed countries though the economists are less likely to adopt this methodology for evaluating workers' well-being than psychologists as 'economists are suspicious of the usefulness of data on reported well-being' (Blanchflower and Oswald, 1999). But, at the same time, a strong correlation between workers' dis-satisfaction and quitting behaviour - a quite observable phenomenon, provides base for this approach to examine presence of economic insecurity in society. Unlike developing world, a large number of surveys like 'British Household Panel Survey' (BHPS), 'General Social Surveys' (GSS), Household, Income and Labor Dynamics in Australia (HILDA) Survey etc. conducted in the developed nations have adopted this approach to collect information on economic insecurity and related aspects from individuals and households.¹⁶

¹⁶ The BHPS, for example, while collecting information on job insecurity asks the question, "*In the next twelve months how likely do you think it is that you will become unemployed?*" Similarly, in General Household Survey (GHS), it is asked, "*Thinking about the next twelve months, how likely do you think it is that you will lose your*

However, there are various weaknesses suffered by subjective approach. These can be summarised as incomparability, unintelligibility, invalidity, poor reflectors of objective reality and proneness to incorrectness and unreliability.¹⁷ Nevertheless, it cannot be denied that this approach, unlike objective approach, has potentials to capture incidence of insecurity in a more holistic manner and may prove to be a better tool if executed with proper care. Moreover, it is of much use in situations when it is desirable to have temporal dimension but at the same time, the resource constraints permit only cross-sectional survey.

ILO's Notion of Vulnerability and the Informal Manufacturing Sector

ILO's concern about quantification of vulnerability incidence across the globe has been largely influenced by the standard conceptualisation of vulnerability as provided by Standing (1997, 1999). Standing's work has provided a standard conceptualisation of labour-related security. This conceptualisation is found in various reports published by the ILO.¹⁸ The labour-related securities as suggested by him refer to an adequate level of continuing income (income security), an environment in which there are sufficient opportunities for income-earning activities (labour-market security), protection against unfair and arbitrary dismissals from employment (employment security), safe working conditions and well-being (work security), a situation where people are free to develop their capacities and acquire qualifications (skill reproduction security), the control over content of a job and the opportunity to build a career (job security), as well as having a voice or a way of advancing and defending an interest (representation security).¹⁹

Though there has emerged numerous studies utilising this standard framework across the world,²⁰ it is noteworthy that adoption of this framework as such for diagnosing the incidence of work-related insecurity in the context of informal sector poses problems on two counts: first, some of these vulnerabilities are so pervasive in this segment²¹ that it becomes irrelevant to examine them through statistical exercises when their incidence is

job or be laid-off – very likely, fairly likely, not too likely, or not at all likely?” (quoted in Benito, 2004; Blanchflower and Oswald, 1999)

¹⁷ See, Veenhoven (2002: 36-40).

¹⁸ See, for example, ILO (2004).

¹⁹ In this line, also see, Anker (2002), Anker, et al. (2003).

²⁰ See, for example, De Ruyter and Burgess (2003); Chernyshev (2006) and Kantor, et al. (2006).

²¹ Job security is such security whose absence is so pervasive in unorganised sector.

otherwise evident; second concern arises from the fact that this approach is not specifically designed for examining vulnerability of informal workforce; rather it has been designed for examining incidence of vulnerability among general workforce.²²

Nonetheless, one may derive certain insights from this standard framework and may conceptualise accordingly the nature of vulnerability in informal manufacturing sector. One may conceptualise wagedworkers' exposure to work-related vulnerability as incorporating five domains related to their jobs, economic profiles, functional behaviour, agency and recognition. The insecurity aspect related to wagedworkers' job may include not only job loss possibility and threat of job loss – a standard practice in literature²³, but a due significance may be placed on the aspect of job search as the wagedworkers adopt a variety of channels to find jobs and each and every channel have varied implications for well-being of wagedworkers. Likewise, the insecurity aspect related to economic profiles of wagedworkers may lay emphasis not only on wagedworker's earning and saving potentials – as done by the ILO²⁴ but a due recognition may be made to the aspect of borrowing behaviour. Wagedworkers at times of income insufficiency resort to borrowing from co-workers / friends, employers or contractors. It is very much evident that each of this source of borrowing has different implicit undertones related to economic vulnerability of wagedworkers. The insecurity aspect related to wagedworkers' functional behaviour may include a wide range of hardships related to their working environs. A due emphasis may be placed on capturing the aspects of work-intensity, working environments, job satisfaction and the health adversities. As the aspects of opportunity and autonomy also bear significance in working lives of wagedworkers, so these aspects may be included in any discussion on wagedworkers' exposure to agency insecurity. Similarly, in the light of pervasive discrimination in dependent employment relations, any conceptualisation of vulnerability should not forget to put due emphasis on aspects of dignity, employer's care and concern besides tracing the incidence of discrimination in terms of nature of work, employer's and co-workers' treatment and working hours.

²² It is noteworthy that this approach does not distinguish between formal and informal segments in developing countries. As we know that the workforce in latter segment is relatively more vulnerable than the former, it becomes difficult to adopt this framework as such without making any refinements.

²³ See, Naswall and Witte (2003).

²⁴ ILO (2004), for example, considers a worker as economically insecure if 1) he does not earn adequate incomes 2) he is not able to save 3) if he is not able to save on regular basis. This definition does not consider borrowing behaviour and access to credit. Also, it does not give significance to the variability of earnings – an aspect that is almost a reality in the working lives of the informal manufacturing workers.

Similarly, any discussion on vulnerability of self-employed workers should explore the incidence of occupational uncertainty, operational vulnerability, functional vulnerability and economic vulnerability. The aspect of occupational uncertainty may be captured through an exploration of occupational sustainability and exposure to competition. The aspect of operational vulnerability may focus on tracing down intensity of various constraints experienced by these workers. One may consider four major constraints, viz. raw material constraints, technical constraints, financial constraints and marketing constraints. The functional vulnerability may be conceptualised to capture self-employed workers' experience of work-intensity and health adversities.²⁵ Similarly, economic vulnerability may capture broadly self-employed workers' earning potential and resourcefulness.

Analytical Issues

A major analytical issue emerges from the fact that the informal manufacturing workforce is heterogeneous in its nature. Therefore, any attempt for examining incidence of vulnerability should recognise this heterogeneous character of workforce by devising differently the nature of vulnerability experienced by these workers. There are primarily three kinds of workers in this segment. These are self-employed workers, wageworkers and employers. Among them, these are the former two types of workers who experience a relatively high incidence of work-related vulnerability. The self-employed workers experience vulnerability due to their small scale and implicitly dependent nature of their businesses whereas the wageworkers' employment remains exposed to vulnerability due to their dependent nature.

Similarly, the analytical issues underlying examination of vulnerability in worker households should concern three aspects, viz. 1) identification of better endowed or poorly endowed household, 2) recording of various coping mechanisms adopted by household in the event of their exposure to unforeseen contingencies and 3) quantification of vulnerability impact on worker households.

²⁵ Broadly, this insecurity covering functional aspects of the work is similar to that experienced by wageworkers except one basic difference: the wageworkers have no choice to avert imposed functional insecurity due to the dependent nature of employment relationships whereas the self-employed workers, though similar, may better condition their exposure to functional insecurity due to the implicit autonomy – provided they do not use this autonomy for maximising their economic returns through self-exploitation.

Regarding first aspect, standard *Asset Vulnerability Framework* devised by Moser (1998) may be adopted as it links household's asset profile with its resilience to withstand economic shocks. By way of analysing incidence of deprivation in household's possession of various assets, its position as 'better-endowed' or 'poorly-endowed' may be assessed but at the same time, it needs to be recognised that it may not be possible to capture fully the resilience power of household merely by looking at its asset profile so there may be a need to supplement this approach with a consideration of certain characteristics like employment status, migration status, social class etc. as these characteristics are found to be much related to economic soundness of the household.

Regarding second aspect of recording various coping mechanisms undertaken by household for mitigating the impact of certain unforeseen shock, the analytical perspective aptly recognises the fact that worker households are prone to experience a variety of shocks such as job loss, fall in income, minor sickness, major sickness, child birth, bread-earner's death, marriages, social ceremonies etc. The list being too long restricts analytical scope but, it is possible to comprehend these shocks as major shocks and minor shocks as per their intensity felt by household. Similarly, the analytical framework also recognises the fact that households adopt a range of coping mechanisms. Therefore, this framework also comprehends these coping mechanisms.

Regarding third aspect of evaluating impact of insecurity on well-being of household members, it is desired to attach significance to individual vulnerability of household members. Rather than deriving household level comprehensive profile, it is desired to examine individual level variations across gender and age of household members. Nonetheless, the incidence of disparities across households differing along the lines of social class, worker type, economic class etc. may also be examined. For capturing the impact of insecurity on well-being of household members, significance may be assigned to assess the extent to which an individual's freedom to decent life is affected. The freedom to decent life may be conceptualised as an aggregate of three freedoms, viz., freedom from hunger, freedom from morbidity and freedom from illiteracy. All these three freedoms reach their maximum so as to enable an individual to enjoy the attainment of a decent life.

A FINAL WORD

The purpose of this paper is three-fold: first, to have a theoretical understanding of various perspectives on the nature and scope of the informal sector; second, to discuss the meaning of vulnerability as understood in literature by way of highlighting its conceptual distinctiveness from the notions of poverty, risk and uncertainty and the third, to conceptualise the nature and scope of vulnerability in the context of informal manufacturing sector. The paper, in its endeavour, has found that there has been the non-existence of a sound framework for examining the vulnerability incidence in this segment. Therefore, it has proposed a certain framework by conceptualising the nature of vulnerability in informal manufacturing sector. In its endeavour, it discusses first the meaning of vulnerability in this segment. It is followed by a detailed explanation on various factors that contribute to emergence and persistence of vulnerability in this segment. Following this, it lays down certain criteria to diagnose those who are at the risk of being vulnerable in this sector and finally, it looks for the appropriate approach to capture vulnerability incidence among the working masses.

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